## IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 5, June 2025



## Design and Development of a Mobile Application for Ordering Food from a Digital Menu, with Real-Time Data Synchronisation and Storage on the Cloud for Enhanced Order Management and Analytics

Bandari Ravi<sup>1</sup>, Rohan Kumar Lenka<sup>2</sup>, Poreddy Snuhith Reddy<sup>3</sup>, Sardar Rajvir Singh<sup>4</sup> Assistant Professor, Department of CSE<sup>1</sup> Students, Department of CSE<sup>2,3,4</sup> Guru Nanak Institute of Technology, Hyderabad, Telangana

Abstract: In the digital age, mobile food ordering applications have transformed the way consumers interact with restaurants, offering convenience, personalization, and real-time service at their fingertips. This project presents the design and implementation of a user-centric, cloud-integrated food ordering mobile application aimed at streamlining the entire ordering and delivery process. The system is built to provide a seamless experience for both users and restaurant owners, utilizing advanced technologies such as cloud computing, real-time tracking, secure payment gateways, and intuitive user interface design. The architecture of the app leverages cloud platforms to ensure scalability, real-time data synchronization, and uninterrupted service across multiple user touchpoints. By employing Firebase and cloud-based APIs, the application manages live order updates, inventory tracking, and user interactions efficiently. Real-time order tracking, enabled through GPS and WebSocket technology, offers customers transparency and assurance, contributing to increased satisfaction and trust in the platform. The system also supports dynamic menu management and personalized recommendations using analytics-based insights derived from user behavior and historical data. Security is a foundational pillar of this application, with end-to- end encryption, tokenization, and compliance with PCI-DSS standards for payment integrations, safeguarding user transactions and data. The user interface has been meticulously designed to prioritize ease of use, accessibility, and responsive navigation. Features such as one-click ordering, search filters, favorites, and push notifications enhance user engagement and convenience. Additionally, the platform benefits restaurant owners by offering dashboards for analytics, sales tracking, and customer feedback, allowing data-driven decisions to improve operational efficiency. This project not only provides a functional and secure mobile application for food ordering but also exemplifies how modern technologies can be harmonized to enhance user satisfaction and business intelligence. The result is a robust system that adapts to evolving customer needs and contributes to the digital evolution of the hospitality industry.

Keywords: food ordering applications

Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27703



19